

**REMARKS**

Claims 9, 14, 15, 22 and 23 are pending in this application.

By this Amendment, claim 9 is amended for clarity. Claim 23 is added to recite additional features disclosed in the specification at, for example, paragraph [0044].

Reconsideration of the application is respectfully requested.

The Office Action rejects claim 9, 14, 15 and 22 under 35 U.S.C. §103(a) over U.S. Patent Publication No. 2002/0151161 to Furusawa in view of U.S. Patent No. 5,666,270 to Matsuda et al. further in view of U.S. Patent No. 5,790,377 to Schreiber et al. This rejection is respectfully traversed.

The Office Action rejects claims 9, 14, 15 and 22 under 35 U.S.C. §103(a) over U.S. Patent Publication No. 2002/0151161 to Furusawa in view of U.S. Patent No. 5,666,270 to Matsuda et al. further in view of U.S. Patent No. 5,790,377 to Schreiber et al. Schreiber is a newly applied reference. Schreiber issued on August 4, 1998, thus qualifies as a prior art reference under §102(b).

The Office Action acknowledges that Furusawa does not disclose or suggest hardening a protruding part precursor of resin by applying UV rays to form a protruding part. However, the Office Action asserts that Matsuda discloses this feature in Fig. 7B and col. 5, lines 21-26. The Office Action further asserts that one of ordinary skill in the art would have been motivated to combine Matsuda with Furusawa in order to create a bump core that has a small stiffness and is flexible. (See Office Action at page 3, lines 8-13)

However, one of ordinary skill in the art would not have been motivated to combine Matsuda with Furusawa to form an electrode bump on an insulating layer without a conductor between the electrode bump and the insulating layer.

In particular, the bump electrode 30 disclosed in Matsuda is for making electrical connection between the mounting circuit board 41 and the semiconductor element 31. See

Fig. 5 and col. 4, lines 26-36 of Matsuda. Thus, Matsuda's electrode bump 30 is required to be formed on an electrode 32 or an intermediate metal layer 34, so as to ensure electrical connection. Hence, Matsuda's electrode bump 30 is not disclosed to be formed on an insulating layer. Therefore, one of ordinary skill in the art would not have been motivated to combine Matsuda with Furusawa to form an electrode bump on an insulating layer without a conductor between the electrode bump and the insulating layer.

Furthermore, one of ordinary skill in the art would not have been motivated to combine Matsuda with Furusawa for the following additional reasons.

Furusawa discloses discharging droplet. However, the droplet is fine particle dispersion solution (Line 1 of paragraph [0050]). The fine particle dispersion solution is heat-treated in order to remove a solvent and to improve electrical contact (Lines 1-4 of paragraph [0054]). The droplet cannot replace the fine particle dispersion solution with UV-hardening resin, because, if the droplet had been UV-hardening resin, the conductive film would not have had the electrical contact.

On the other hand, Matsuda discloses hardening a UV-hardening silicone resin layer 60 by applying UV ray to form a protruding part precursor (Fig. 7B, col. 5, lines 21-24). A protruding part 35 is formed by an etching step (Fig. 7D, col. 5, lines 32-36). A step of forming the protruding part precursor cannot replace the etching step (Fig. 7C) with discharging the droplet. If the step of forming the protruding part precursor had been discharging droplet, the position of the protruding part precursor would not have been controlled, because Matsuda does not disclose a step of forming a liquid repelling part. Accordingly, one of ordinary skill would not have been motivated to combine Matsuda with Furusawa.

To expedite prosecution, claim 9 is amended to recite "forming the protruding part directly on the insulating layer" for clarity to further distinguish over Matsuda and Furusawa.

In particular, Matsuda and Furusawa do not disclose or suggest "forming the protruding part directly on the insulating layer" as recited in claim 9.

For any or all of the above reasons, one of ordinary skill in the art would not have been motivated to combine Matsuda and Furusawa, to render obvious the subject matter recited in claim 9. Accordingly, withdrawal of the rejection of claim 9, and claims 14, 15 and 22 depending therefrom, under 35 U.S.C. §103(a) is respectfully requested.

Claim 23 is believed to be patentable, at least in view of the patentability of claim 9, from which it depends, as well as for additional features it recites.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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